Letter from Edward A. Fay to Alexander Graham Bell, February 6, 1872

Washington, Feb. 6, 1872. Dear Sir:—

Your favor of Jan. — is received, and the MSS. I will place the latter in the printer's hands at once, and send you the proofs.

I paid Lutz's bill for the illustrations ($20.), which I suppose is as large an outlay as the Annals is justified in making in connection with your article. I made no charge for the extra copies sent by your order, so I believe we are “quits”. I will send you the printer's bill for the copies of “Visible Speech” printed separate?, when it is received.

Yours truly Edward A. Fay. Mr. A. Graham Bell.

WASHINGTON DC

Mr. A. Graham Bell

Melville House Brantford Ontario Canada

BRANTFO??

2-B-2 The Deaf 1 37 Return to “ Bells' Room”

AMERICAN ANNALS OF THE Deaf and Dumb, EDITED BY EDWARD A. FAY, UNDER THE DIRECTION OF E. M. GALLAUDET, OF WASHINGTON, E. C. STONE, OF CONNECTICUT, I. L. PEET, OF NEW YORK, W. J. PALMER, OF ONTARIO, AND THOMAS MACINTIRE, OF INDIANA.

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AMERICAN ANNALS OF THE DEAF AND DUMB.

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VISIBLE SPEECH AS A MEANS OF COMMUNICATING ARTICULATION TO DEAF-MUTES. BY A. GRAHAM BELL, BOSTON, MASS.

The system of “Visible Speech” was invented by my father, Mr. A. Melville Bell, professor of vocal physiology; and it constitutes a new species of phonetic writing, based, not upon sounds, but upon the actions of the vocal organs in producing them.

The plan originated fully a quarter of a century ago; and the germ of the invention was published in the first edition of “The Principles of Speech,” (1849.)

The idea conceived was that of representing the sounds of all languages by means of one alphabet, the characters of which should reveal to the eye the organic formation of the sounds. Although my father's professional duties as a corrector of the defects of utterance directly favored the study of the organic formation of sounds, still, the difficulties in the way of carrying out the idea were so great that it was not until 1864 that the plan took definite shape. Then, indeed, a scheme of letters was produced which claimed to be so perfect as to represent *any sound the human mouth could utter.*

Linguists and men of science were invited to test the truth of this assertion. The invitation was accepted; 2 and for three years the most searching tests were applied in public and in private. The following facts were abundantly proved:

1st. That the sounds of any language could be written by means of Visible Speech; and,

2d. That a person unacquainted with a language could pronounce it at sight, with vernacular correctness, while deducing his pronunciation solely from the physiological symbols.

An account of a few of the earlier experiments was published in a pamphlet entitled "Visible Speech; a New Fact Demonstrated," (1864.)

To convey an idea of the nature of these experiments, I quote a description of one from a letter to the *Reader,* by Mr. A. J. Ellis, the distinguished author of the "Essentials of Phonetics." Mr. Ellis says:

"The mode of procedure was as follows: Mr. Bell sent his two sons, who were to read the writing, out of the room—it is interesting to know that the elder, who read all the words in this case, had only had five weeks' instruction in the use of the alphabet—and I dictated slowly and distinctly the sounds which I wished to be written.

"These consisted of a few words in Latin, pronounced first as at Eton, then as in Italy, and then according to some theoretical notions of how the Latins might have uttered them. Then came some English provincialisms and affected pronunciations; the words 'how odd' being given in several distinct ways.

"Suddenly German provincialisms were introduced. Then discriminations of sounds often confused: *ees, is',* (Polish;) *eesh, ich,* (German;) *ich,* (Dutch;) *ich,* (Swiss;) *ouï, oui,* (French;) *we,* (English;) *wie,* (German;) *vie,* (French.) Then some Arabic, some Cockney-

English, with an introduced Arabic guttural, some mispronounced Spanish, and a variety of shades of vowels and diphthongs.

* * * * The result was perfectly satisfactory; that is, Mr. Bell wrote down my queer and purposely-exaggerated pronunciations and mispronunciations, and delicate distinctions, in such a manner that his sons, not having heard them, so uttered them as to surprise me by the extremely correct echo of my own voice. * * Accent, tone, drawl, brevity, indistinctness, were all reproduced with surprising accuracy. Being on the watch, I could, as it were, trace the alphabet in the lips of the readers. I think, then, that Mr. Bell is justified in the somewhat bold title which he has assumed for his mode of writing—'Visible Speech.'"

3

This examination of the capabilities of the system, which may fairly be called an *experimentum crucis,* was made before the symbols of Visible Speech had been exhibited to Mr. Ellis. As he is, perhaps, the best living authority on the subject of phonetics, it may be interesting to know the opinion he formed of the *theoretical details* of the system when these were presented to him. I quote from another letter of his.

After referring to his own works, those of Amman, De Kempelen, Johannes Müller, K. M. Rapp, C. R. Lepsius, E. Brücke, S. S. Haldeman, Max Müller, and "a host of other works of more or less pretensions and value," (the treatises enumerated containing perhaps "a complete account of the present state of phonetical knowledge,") he says:

"Now, it is with this full and distinct recollection of works which I have not only read, but studied, many of them with great care and attention, that I feel called upon to declare that until Mr. Melville Bell unfolded to me his careful, elaborate, yet simple and complete system, I had no knowledge of alphabetics as a science. Much had been done. * * * But alphabetics as a science—and I have looked for it far and wide—did not exist. We did not know what elementary sounds or modifications of sound should be expressed, and the art

of expressing such as had been pretty generally received was in a state of the greatest confusion."

USES OF THE INVENTION.

Among the uses of the system most interesting to the general reader, I may note:

1st. *The correction of stammering and other defects of speech; and the communication of articulation to deaf-mutes, by showing the proper position of the mouth in forming sounds.*

2d. *The teaching of illiterate adults in all countries to read their own language from books printed in the system.*

The imperfectly phonetic character of all previous alphabets has been the cause of the great length of time required to master the art of reading. Had each sound an invariable representative, and each letter an invariable sound, a pupil would commence to read whenever the 4 powers of the letters had been acquired. Hence, the hope is indulged, that, when works have been printed in the Visible Speech typography, illiterate adults may be enabled to read such books *in a few days.*

3d. *The formation of a system of raised letters, of universal applicability, for the use of the blind.*

This is a development of the stenographic alphabet of Visible Speech. The words are capable of contraction according to the rules of stenography, so that works printed in this system need not be nearly so bulky as those at present used by the blind.

4th. *The writing of hitherto unwritten tongues for missionary and other purposes.*

No instance of failure has yet occurred in the representation of the most difficult sounds, taken from over fifty languages.

5th. To the comparative philologist Visible Speech is invaluable, as a means whereby fast-disappearing dialects may be preserved for study and comparison, and the affinities of words be exhibited to the eye.

It must not be supposed that this list exhausts the applications of the system. It has been adapted to the wants of stenographic reporters in all countries, to the telegraphing of all languages without translation, and other new uses are constantly suggested.

The applications of the system were early seen to be so many and important that the British press was loud in its support of the inventor in his appeal to the English government for aid in publishing and applying his system. This appeal was unsuccessful; and so, in 1867, Professor Bell produced the inaugural edition of the system, entitled “Visible Speech; the Science of Universal Alphabetics.”

APPLICATION TO DEAF-MUTES.

In 186 9 8 , the first attempt was made to communicate a knowledge of the symbols to deaf-mutes. This experiment 5 was tried at a private establishment in South Kensington, England, conducted by Miss Hull.

No difficulty was found in giving the idea of the symbols to four children, the oldest about twelve and the youngest about seven years of age, and nearly all the elementary sounds of English were obtained from them *in a few days.*

It was at once evident that Visible Speech would be an instrument of great power in the hands of teachers of the deaf and dumb; and it became an absorbing problem how best to use it. Becoming, myself, intensely interested in the subject, I wrote to Mr. Peet, of New York, wishing to experiment with the symbols in the institution for deaf-mutes there. This was impossible at that time; but Mr. Peet brought the subject before the notice of American teachers at the recent Indianapolis Convention.

Since the experiment in South Kensington, a theoretical plan of instruction has been devised, but no opportunity was found of applying it till the spring of the present year.

In the meantime, Miss Hull, though laboring under the disadvantage of having no definite plan to work by, has been experimenting further with the symbols in her school. In a letter just received from her, referring to a visit from Miss Rogers, the principal of the Clarke Institution, she says: “My school will be the representative in England of your father's system applied to the deaf, which I, too, believe to be the true philosophical foundation for instruction in articulation.”

Comparing the results obtained by her with those produced by Mr. Van Praagh, in London, working upon the German method, she says: “I certainly think our pupils spoke much plainer and more readily after six months' instruction than his did after twelve; but of course I am a prejudiced judge in that matter. I look to Visible Speech to obtain much greater and more certain results than any yet produced.”

6

The lectures given by the inventor in the various towns of the United States during the last three years drew the attention of educationists to the subject; and mainly through the exertions of the late Hon. Dexter S. King, it was resolved that the system should be experimented with in the Boston school for deaf-mutes. The committee of that school invited me to visit Boston for the purpose of instructing the teachers in the use of the symbols. During the month of April, 1871, all the teachers were close students of the system. By the 1st of May, they had acquired sufficient knowledge of the symbols to conduct experiments under my superintendence; and by the 1st of June I was enabled to relinquish the conduct of the experiment into the hands of Miss Fuller, the principal of the school.

On the 13th of June, a public exhibition was given of the condition of the school, and it was shown that the very youngest children had comprehended the meaning of the

symbols. Taking the school as a whole, it was found that, during the month of May, over three hundred English sounds, which the pupils had formerly failed to utter by imitation, had been obtained by means of Visible Speech. Class illustration was given of the pronunciation of syllables with differences of accent and quantity, and individual illustration of the *perfect utterance* of words and sentences. Adult deaf-mutes were present who had acquired all the sounds of the English language in ten lessons, and who could articulate a large number of words with absolute correctness. One pupil of the school, to whom special instructions had been given in the principles of elocution, read Longfellow's “Psalm of Life,” from elocutionary marks, with natural and expressive inflections of the voice.

The following letters have recently been received concerning the experiment in the Boston school:

7

From the Committee of the Boston School for Deaf-Mutes. Boston, *Nov.* 1, 1871. A. Graham Bell, Esq.:

Dear Sir: The system of Visible Speech, invented by your father, and so successfully introduced by you into the Boston school for deaf-mutes, has given the teachers an instrument of incalculable value in teaching deaf-mutes (congenital as well as others) to articulate clearly and correctly.

It has been heartily adopted as the system of the school, and the surprising results exhibited by the pupils at the close of your brief course of instruction are increasingly apparent every day.

Trusting you may be as successful in your future labors as in those we have witnessed, we remain, very cordially, your friends,

IRA ALLEN, *Chairman.*

GEO. F. BIGELOW.

From the Principal of the Boston School for Deaf-Mutes. School for Deaf-Mutes, Boston, *Nov.* 4, 1871. A. Graham Bell, Esq.:

Dear Sir: In compliance with your request, I am happy to give you my opinion regarding the value of Visible Speech in teaching articulation to deaf-mutes.

I can say, with confidence, that I have found it of the greatest assistance. The consonants, *b, d,* and *g,* which are the most difficult to obtain by imitation, are, by means of the symbols, produced with great ease and accuracy; and the consonant combinations, such as *ct, ks, nd,* etc., which were often very faulty, are, by this system, acquired perfectly.

In teaching vowels it is of especial value. The Visible Speech symbols make the child conscious of the correct positions of the mouth for producing these sounds. Hitherto such elements have been our greatest difficulties. I have been able to correct in several cases very imperfect vowel sounds which had baffled all attempts ?nder the old system of imitation.

Although I have had but little experience in the use of Visible Speech, I am quite convinced that if we had begun our work with a full knowledge of this system, we should have been spared a great amount of difficult and often discouraging labor, and produced much better results.

Yours, respectfully, SARAH FULLER.

From the Superintendent of Public Schools in Boston. City of Boston, Department of Public Instruction, Superintendent's Office, City Hall, *October* 7, 1871. A. Graham Bell, Esq.:

My Dear Sir: I congratulate you most cordially on the success of your experiment in the application of the science of Visible Speech, which was invented and developed by

your father, to the 8 instruction of the pupils in our Boston deaf-mute school. Heretofore, instruction of deaf-mutes in artificial articulation has been wholly imitative and empirical, and although the system is extensively employed, it has produced useful results only at the expense of incredible labor and patience on the part of both teachers and pupils.

You have, by your experiment in our school, proved the practicability of producing in congenital deaf-mutes *perfect* articulation, with vastly less labor than has been required to produce only imperfect articulation.

What is still more wonderful, if possible, you have succeeded in enabling deaf-mute pupils to modulate the voice, by giving a higher and lower pitch, and the upward and downward and circumflex inflections.

What you have done in the short time you have been engaged in our school has convinced me that the science of Visible Speech is to become a powerful and an indispensable instrumentality in the instruction of deaf-mutes.

I know of no greater step of progress, in this speciality of education, than this you have introduced, since the days of the Abbé de l'Epée and Samuel Heinicke.

Very truly, yours, JOHN D. PHILBRICK.

I am at present engaged in conducting experiments with Visible Speech privately in Boston. An account of the results obtained will be presented to the readers of the *Annals* in due time.

Begin

The system is now undergoing experiment in the Northampton Institution for Deaf-Mutes, and it will be introduced into the American Asylum, Hartford, in May, 1872.

POPULAR ERRORS CONCERNING THE FUNCTIONS OF THE NEW ALPHABET.

I have attempted, in the preceding pages, to convey an idea of the nature and uses of Visible Speech; to give an outline of the history of the invention, and to state the results of its introduction into the Boston school.

I shall now supplement this by a brief description of the symbols themselves, the mode of communicating them to deaf-mutes, and the plan of instruction so far as developed. But before doing this, I think it right to correct any misapprehensions that may arise concerning the functions of the new alphabet.

9

1st. In regard to general applications.

There is no intention of superseding existing alphabets by the new letters. The system must, therefore, not be confounded with any phonetic movement, such as that at present existing in England. It is intended solely for international and scientific purposes, and as a key to other alphabets. In the words of Prof. de Morgan, it forms “ a sound-bridge from language to language, from no speech to speech.”

2d. In its application to deaf-mutes.

(*a.*) The system does not interfere with any existing plan of education. Visible Speech takes *no part* in the contest between articulation, on the one hand, and signs and manual alphabets on the other. In presenting his system for adoption, all that the inventor means to say is this: “Here is a means by which you can obtain perfect articulation from deaf-mutes; *make what use of it you choose.*” He places the *tool* in the hands of teachers, with general directions how to use it.

(*b.*) Visible Speech is not *necessarily* associated with lip-reading. There is no doubt that, in schools where lip-reading is employed, the symbols will materially assist the pupils by

showing them *what to look for* in the mouths of hearing persons, but this is apart from its greater sphere of usefulness as a means of communicating articulation.

(*c.*) Visible Speech does not profess to teach the deaf to *modulate their voices;* it deals with articulation pure and simple.

There is no doubt that, by means of the symbols, the quality or “timbre” of the voice may be influenced; and future experiments will show how far a harsh and disagreeable voice may be made soft and pleasing by means of them.

Deaf-mutes may be taught to modulate their voices, and to read with expression, by means of an (at present) unpublished development of Visible Speech, which aims at representing pictorially the changes of the voice in regard to force, duration, and pitch. This system constitutes 10 an elocutionary, and, in its fullest development, a musical notation, accomplishing for the throat what Visible Speech does for the mouth.

We all know that our deaf-mute pupils give on the play-ground and elsewhere *perfectly natural inflections.* They laugh and cry like other children. The problem is to make them *conscious* of the movements of their voices. Experiments in the Boston school have proved that this can be done.

MODE OF COMMUNICATING VISIBLE SPEECH TO DEAF-MUTES.

The elementary symbols are pictorial of parts of the mouth and of their modes of action. As the various organs of speech are disposed in forming any particular sound, the corresponding symbols are put together to build up a compound character indicative of the position of the mouth. This compound character most truly represents the sound intended, because no person can put his mouth into the position indicated without producing it.

The symbols have been successfully explained to deaf-mutes in the following manner: The outline of a face turned toward the right is drawn upon the blackboard, (see illustration,)

and a representation of the inside of the mouth is added. The pupil's attention is directed to the various parts of the diagram, and he shows his appreciation by touching the corresponding portions of his own face or mouth. When the teacher points to the arrowhead, a motion of the hand is made to suggest that it means “air coming out of the mouth.”

Those portions of the face represented in the illustration by dotted lines are then erased from the board, and attention is directed to the broken remains of the diagram. When the teacher points to the fragmentary nose, lip, or tongue, etc., the pupil touches his own nose, lip, or tongue.

It will be observed that these disjointed portions of the diagram are the *Visible Speech symbols for the corresponding parts of the mouth.* The symbol for “lip” is the outline

ILLUSTRATIONS OF VISIBLE SPEECH. *Fig. 1*

Fig. 2.

Fig. 3.

Fig. 4.

11 of a lip; that for the point of the tongue its picture, and so with other parts.

The sign for the lip is used for every sound formed by the lips; so with the point of the tongue, the top or “front” of the tongue, and the back of the tongue.

The sign for the throat represents a mere chink or slit in the throat, and is pictorial of the vocalizing condition of the glottis. It therefore means “voice.”

The sign for the nose is, in reality, pictorial of the uvula, the pendulous extremity of the soft palate. When the soft plate is depressed, the breath passes up behind it and escapes through the nostrils. When it is raised, the communication between nose and mouth is cut

off. Hence the application of a symbol originally pictorial of the soft palate to the nose. It means “air passing through the nostrils.”

But to return to our pupil. He knows nothing of the deep meaning underlying these symbols. To him the strange lines upon the board are only the remains of a picture. Filling up the gaps, in imagination he recognizes the crooked line as a portion of the nose, the curves as so many parts of the mouth, and the straight line as the throat.

The next step is to isolate the symbols, so that our deaf-mute shall recognize them independently of their position in the diagram. They are accordingly written in one line below the fragmentary picture.

The crooked character is shown, by reference to the face above, to be the same as the nose; the straight line, the throat; and the curves, the various parts of the mouth.

The elementary forms are then built up into more complex shapes.

The second line illustrates the junction of the curves with the straight line.

In the first symbol the curve is seen to be the under lip, and the straight line the throat. The name of the 12 symbol is “lip-voice.” The child describes it by pointing to his lip and then to his throat.

The third line shows the union of the nose sign with the various curves; and the fourth exhibits a triple combination, viz: a part of the mouth, with nose and voice signs added.

A character indicating a peculiar position of the vocal organs is next introduced. Observe the first symbol in the fifth line. The space enclosed by the curve is symbolically *shut in* by a line drawn across the ends.

Thus a straight line (made thin to distinguish it from “voice”) is called “shut.” The idea is conveyed by forcibly closing a book before the eyes of the pupil. Whenever he names the sign he imitates this motion.

The fifth line exhibits the union of this symbol with the various curves. The first character in the line, named “lip-shut,” is described by touching the under lip, and then imitating with the hands the closing of a book. Here, for the first time, the idea of the directive nature of the symbols begins to dawn upon the deaf-mute. In conducting classes I have invariably found that when this point has been reached, at least one of the pupils would illustrate the symbol by *shutting his lips.*

The characters in the sixth line are composed of a curve and the signs “ shut, voice.”

Those in the seventh contain a curve and “shut, nose;” and the symbols in the eighth line are analyzed into a curve and “shut, voice, nose.”

The broken outline of the face, which has been retained as an assistance to the memory, is now dispensed with, and the pupil is required to describe all the symbols again.

For the convenience of the reader, I give below the names of the symbols, in a tabular form, using the initial letters of the words Shut, Voice, Nose, Lip, Point, Front, Back:

13

(*key to Fig. 2.*)

N V L P F B LV PV FV BV LN PN FN BN LVN PVN FVN BVN LS PS FS BS LSV PSV FSV BSV LSN PSN FSN BSN LSVN PSVN FSVN BSVN.

It will be observed that, though at the first lesson thirty-four characters have been introduced, the memory is burdened with only four forms, viz: a curve, (turned in different directions,) a crooked line, a thick, straight line, and a thin one.

“ Though the sounds of speech may be *infinite* in variety, they are all formed by a limited number of organs; and they can all be represented by the combinations of ten elementary symbols.

“ The name of a sound-symbol is in reality a command *to do something with the mouth.*

“ Take, for example, the first character in the eighth line, (see illustration,) “lip, shut, voice, nose.” This is, in effect, a direction to shut the lips and pass the voice through the nose. In explaining this symbol to a deaf-mute, one of his hands is placed upon the teacher's throat, and the other against the nose. If, then, the teacher makes the sound of the letter M, the pupil *sees* that the lips are shut, and *feels* a vibration in the throat and nose.

“ The symbols in fig. 3 represent the sounds of the following letters as taught to the children in the Boston school:

P B M T D N K G NG.

“ All one can say concerning the Roman letters is, that P is P, B B, etc. But the symbols tell us that P is formed by shutting the lips, and then making a puff of air, while for B, the lips are to be shut while the voice is sounded, and then a puff of voice is to be given, etc.

“ The characters exhibit to the eye all the relations that 14 the sounds themselves do to the ear; and the organic relations are just as clearly shown:

As P is to B, so is T to D, and K to G.

As B is to M, so is D to N, and G to NG.

As P is to T, so is B to D, and M to N.

As P is to K, so is B to G, and M to NG, etc., etc.

P, B, and M have the “lip” and “shut” signs in common; and in sounding all, the lips are shut.

T, D, N, agree in shutting off the breath by means of the point of the tongue, and K, G, NG, in the closing action performed by the back of the tongue.

Furthermore, the sounds P, T, K, (represented by the same symbol turned in different directions,) are made by the same organic action performed at different parts of the mouth; so with B, D, G, and M, N, NG.

When a deaf-mute has thoroughly mastered the meaning of the symbols, he is required to sound one of the characters; that is, the attempt is to be made to do with the mouth what the symbol directs.

The pupil, having little or no control over the movements of the vocal organs, will probably make a very different sound from that intended; but the first point gained is, that he makes a noise of some kind. Whatever it happens to be—whether a cough, or a growl, or a sneeze (!)—it can be written symbolically. From this sound as a starting-point, others can be developed in every direction, until all the English elements have been obtained.

I shall illustrate by a case that has actually occurred.

A middle-aged deaf-mute, a resident of Boston, was studying the symbols with me.

I directed his attention to the vibration of my throat in sounding voice. He attempted to imitate this by a peculiar hawking noise—somewhat as if he were coughing up phlegm.

After repeating the sound several times, he analyzed my representation of it, (see fig. 4,) and thus became conscious 15 scious of what his mouth was doing. In forming this sound the tongue is first put back so as to shut off the air from the mouth. The breath is then forced out between the tongue and soft palate in such a way as to set the uvula vibrating.

Upon presenting the symbols to him, minus the “trill” or shake, he made the sound gently, and without vibrating the uvula. What he gave was in reality an English element, (K,) followed by the German sound of *ch.*

The next point to be attained was to separate these elements, so as to have the English sound on one side, and the foreign one on the other. The first element of his sound was accordingly written with the sign for a puff of breath after it. He gave at once the letter K. The German *ch* was also obtained at sight of its symbol.

The attempt to pronounce K with voice produced G; and NG resulted from passing the voice through the nose.

By sounding the German *ch* with the lips nearly closed the English WH was obtained. W was given by adding voice. This sound may be considered, for all practical purposes, identical with the vowel *oo* in “pool.” From this vowel five others were obtained by merely opening the mouth very gradually.

Thus from the original hawking noise eleven English sounds were developed by the directive power of the symbols.

This method of leading from one sound to another renders the acquisition of the English elements a matter of absolute certainty; but it is inapplicable to very young children. In all cases, however, mechanical assistance will accomplish what the intellect of the child is unable to do. The symbols inform the teacher of the correct position of the organs in producing any sound. By the exercise of a little ingenuity the child's tongue can be pushed into the required position by means of a pencil or pen-holder.

Mechanical assistance has been found to be so absolutely 16 necessary that a manipulator of a convenient shape has been constructed of ivory.

Suppose we fail to obtain K from a child; a sound of *similar formation, but further forward in the mouth,* may be experimented upon. We shall presume our pupil can pronounce T. In T, the shutting action is performed by the point of the tongue; in K, by the back. (See fig. 3.)

If the teacher holds the manipulator so as to prevent any portion of the tongue from rising *except the back,* the attempt on the part of the pupil to say T will produce K. The manipulator is at once placed in the hands of the pupil himself, and the experiment is repeated. A mirror held before his face shows him the position of his tongue. It invariably follows that after a few attempts the child is enabled to pronounce the sound without any assistance whatever.

A plan for the development of sounds by means of the manipulator has been devised. It may be interesting to know that twenty-six English elements can be *forced* from the one sound TH.

PLAN OF INSTRUCTION.

In teaching articulation a radical difference must be made at the outset between the semi-mute and the deaf-mute proper. The former has already *learned to talk* —the latter has everything to learn.

Our object should be to *keep up the knowledge* of spoken language possessed by the semi-mute, and to teach him the pronunciation of new words. This can be accomplished by the symbols of Visible Speech; and his voice may be prevented from becoming monotonous by the use of the allied elocutionary notation.

But the congenital deaf-mute (who may be taken as the type of the other class) has had no practice in the use of his vocal organs; and his mouth is at first incapable of using the

language of hearing persons. The instrument of speech must be mastered like any other instrument— *by slow degrees.*

17

Hearing children (being guided only by imitation) require five or six years' practice in order to talk correctly, and even then it is astonishing how many grow up with defective articulation.

To expect the congenital deaf-mute to talk the moment he has mastered the elements of speech would be as unreasonable as to expect a child to play one of Beethoven's sonatas when he only knew the notes of his piano. He must have long and patient practice of scales and exercises, in order to obtain command over his instrument; he must have oral gymnastics, as a preparation for speech.

Should any one try the experiment of teaching a novice in music to play a sonata correctly, we may predict the result. Rapid passages would be slurred over, and many false notes be given.

The difficulties of execution would cause the performance to appear, at best, labored and mechanical, and the pupil would probably be disheartened. Should there be any approach toward correct playing, it could only be made through indomitable perseverance on the part of both teacher and pupil.

Analogy reveals the cause of the only partial success that has hitherto attended the efforts to teach articulation to the congenital deaf-mute. The attempt to make him utter words and sentences *from the very outset of his education* can only be productive of imperfect articulation. It will be difficult, and in many cases impossible, to correct afterwards the defects engendered by too great anxiety for progress on the part of his teacher.

The mouth must be educated to produce sounds before the difficulties of spoken language can be successfully grappled with. By means of the symbols the elementary sounds may

be combined in all sorts of ways to form *senseless* compounds analogous to syllables, words, and sentences. These should be uttered at first very slowly; then, by degrees, faster and faster, until the power of correct and rapid utterance has been attained. Then, and 18 not till then, will it be safe to introduce articulation with sense attached.

I have suggested the following plan of instruction, which is suited to the capability of the very youngest beginner.

The imitative faculty of the child should be educated to the utmost, by causing him to copy the motions of the teacher's mouth. Direct him to make his tongue hard or soft, round or spread out flat; let him move it backward and forward, up and down, or in any way the fancy of the teacher may dictate.

English sounds may be obtained by limitation, and associated arbitrarily with their symbols.

The teacher should be careful not to spend too much time in laborious and disheartening efforts to obtain by imitation what will be more easily and certainly acquired afterwards. What is wanted is a mere foundation to work upon in the future. A skilful teacher will not confine himself to English elements, but will take whatever sound the child happens to make, and associate *that* with its correct symbol.

The sounds obtained are to be practised in easy monosyllabic combinations, until they can be certainly discriminated.

When the child's attention is capable of being fixed, the meaning of the Visible Speech symbols may be explained to him. After this, he must *describe* as well as *sound* the elements mastered. No difficulty will be found with children of six or seven years of age.

New sounds should next be developed by appealing to the mind through the analogies of the symbols, and by forcing the tongue into new positions by means of the manipulator.

Thus the mind, the eye, and the sense of touch in the pupil co-operate with the mechanical skill of the teacher to produce sure and certain results.

No articulation, however perfect, will be *agreeable* unless strict attention is paid to the accent and quantity of syllables, and to the modulation of the voice. I have therefore 19 recommended that the study of rhythm, and the cultivation of the voice, should be added as *separate branches of education,* as soon as possible.

It is apart from my present subject to enter into a description of the notation for rhythm and modulation. Suffice it to say that a rhythmical exercise may be written upon the board. The children are required, at first, to clap their hands, or tap their slates, or make some other visible motion, *in concert,* while marching round the room. The rhythmical repetition of a syllable can then be substituted for the clapping of the hands, the pupils marching as before. Finally, the marching is relinquished, and the teacher beats time with his hand instead. In this way an appreciation of rhythm is developed before applying it to words. Classes can be exercised with regular rhythm, as it occurs in poetry; and individuals, with the irregular rhythm of prose.

In regard to the modulations of the voice, all deaf-mutes can be trained to recognize at least five indefinite pitches. These may be called, “very high, high, medium, low, very low.” By gliding from one to another, inflections can be produced. When these have once been obtained, we may seek to associate them with *feelings.*

Suppose the word “farm” to be uttered with a rising inflection suggestive of interrogation. Let the teacher *look* interrogatively. The pupil will unconsciously imbibe the idea that the word “farm,” with such a rise of the voice, is equivalent to the sentence, “Is it a farm?” So with other inflections. Modulations of the voice, expressive of surprise, sorrow, anger, etc., should have their meanings visibly apparent in the face of the teacher.

I look forward with confidence to the time when deaf articulators will be taught the principles of elocution, so as to be enabled to read and speak with expression.

The following is a brief recapitulation of the plan of instruction:

I. 1. Educate the imitative faculty.

2. Obtain sounds by imitation, and associate them arbitrarily with their symbols.

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II. 1. Understand the symbols of Visible Speech, and describe the sounds obtained by imitation.

2. Utter easy monosyllables, formed from the sounds obtained by imitation.

3. Commence the study of rhythmical motions.

4. Obtain differences of pitch.

III. 1. Develop the remainder of the English alphabet from the sounds obtained by imitation.

2. Give oral gymnastics, with monosyllabic combinations of all the sounds perfectly uttered.

3. Repeat a syllable rhythmically.

4. Glide from pitch to pitch, so as to obtain as great a variety of inflections as possible.

IV. 1. Practice oral gymnastics with polysyllabic combinations, giving differences of accent and quantity.

2. Repeat a monosyllable, with differences of accent and quantity, and with inflections of the voice.

V. 1. Utter polysyllables containing difficult combinations of consonants.

2. Give polysyllabic combinations analogous to sentences, attending to accent, quantity, and to the movements of the voice.

3. Teach the spoken names of familiar objects. Seek merely to form a vocabulary.

4. Repeat words with different inflections, so as to convey an idea of the expressiveness of the various tones.

VI. Articulate sentences with fluency and distinctness, attending to accent, quantity, and to the inflections of the voice.

Space has not permitted me to give more than a mere idea of the nature of the symbols of Visible Speech. For further particulars the reader is referred to the Inaugural Edition of the system.*

* This may be obtained from Messrs. Lee & Shepard, publishers, Boston.

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In conclusion, I should like to draw attention to the fact that Visible Speech can be explained by means of diagrams, so that foreign teachers of the deaf and dumb can reap the advantages of the system without the necessity of studying our language.

THE INSTRUCTION OF THE DEAF AND DUMB. BY B. D. PETTENGILL, PHILADELPHIA.

The chief calamity and only very serious evil resulting from congenital deafness and dumbness is the state of intellectual and moral darkness to which the person so affected

is, in consequence of his affliction, consigned. Being without a language, he has but few ideas, can reason only to a very limited extent, and is profoundly ignorant even of the most common matters which form ordinary topics of conversation among persons who hear and speak. In fine, his intellectual condition is little above that of the more intelligent brutes, and lower than the most unenlightened savage's. All philologists and mental philosophers agree that it is the gift of language that chiefly distinguishes man from the brutes, and that, without it, he would have little claim to the title of a rational being.

Evidently, that system of education which most speedily and effectually brings the deaf-mute from darkness to light, most extensively cultivates and improves his intellectual and moral faculties, and the soonest renders him an intelligent, reasonable, and civilized being, is the one most productive to him of beneficial results, and the one most worthy of general adoption. The readiest, and almost the only means of securing these results, is the introduction of this benighted being to an intelligent community where the pantomimic language, called the language of signs, is the ordinary means of communication. The deaf-mute child soon learns the language, and in a very brief period becomes informed of, and able to converse on, all subjects which ordinarily engage the attention of children 22 of his age. By means of signs alone, without the use of language, written or spoken, deaf-mutes may be instructed in every species of knowledge. But without any special instruction, the mere residence of a deaf-mute for a few months in an intelligent community, where signs are employed, by the knowledge which he is sure to gain through that medium, relieves him of the only serious evil of his affliction, and elevates him from the rank of a savage to that of a civilized being. Attempts made, in any quarter, to decry the language of signs, to restrict its use in the instruction of deaf-mutes, or to discard it altogether, are, in my view, mistaken and unreasonable. Deaf-mutes owe an immense debt of gratitude to this beautiful and expressive language, and there is no other medium of instruction which can adequately supply its place. All schemes of educating deaf-mutes which contemplate leaving them for years to grope in the darkness of ignorance, when they might immediately be brought to the light of knowledge, through the medium of signs, I regard as radically

defective and erroneous. The grand aim of all schools for the deaf and dumb should be to enlighten the minds of their pupils and to cultivate in them correct moral and religious principles and habits; this can best be done through the medium of signs.

The other evils than that to which I have referred, resulting from congenital deafness, are simply inconveniences such as persons who hear and speak are often called upon to experience. The most important of these is, that, on leaving the community where he has learned the language of signs, the deaf-mute, if he has acquired that language only, is placed in the position of a person in a foreign land who is unacquainted with the language of the people among whom his lot is cast. A deaf and dumb person, whose mind had previously been cultivated by signs, and who had thus become possessed of ideas to communicate, would undoubtedly, on coming to reside permanently amongst persons unacquainted with his peculiar language, like foreigners who hear and speak, 23 establish some medium of communication with those around him, probably by teaching his own language of signs to some of his more intimate friends, who would act as interpreters to others, and by learning, at his own instance, so much of written language as would enable him to communicate on ordinary topics with strangers; but, as a matter of fact, he usually acquires a sufficient knowledge of written language, for this purpose, in the institution where his knowledge of signs is obtained.

The only remaining evil of the condition of the congenital deaf-mute to be considered is, that the means which he and his friends employ in communicating with each other are slow, indirect, and unusual, and sometimes inconvenient in use; and that, in consequence, much that is said in the social circles in which he moves does not come to his knowledge, and much that he would say, had he the faculty of speech, remains unsaid. This is no great calamity. He does not lose much by not being apprized of all that is spoken in his presence, nor would his associates gain much could he communicate his ideas to them more rapidly, frequently, and directly. But, notwithstanding the slight importance of this small inconvenience, many philanthropists have set themselves to remedy it, as though it were the chief evil of his condition. Incredible pains have been taken in many cases, and

in various institutions for the deaf and dumb, to teach deaf persons to utter sounds which they can never hear or have any conception of, and to understand or rather guess at the words uttered by others by watching the motions of their lips.

The success of these efforts in most cases has been far from satisfactory. A few instances, however, can be named where even congenital deaf-mutes have learned to articulate and read from the lips so well as hardly to be distinguished by their conversation from persons in possession of all their faculties. Where a deaf-mute exhibits a capacity for the attainment of this difficult art, and the time which is necessary for its acquisition can be spared 24 from more important occupations, and the expense which it involves can readily be borne, all agree that the art of conversing by articulation is for him a desirable accomplishment, and more completely restores him to society than can be done simply by writing; but, in most cases, where deaf-mutes have been subjected to the unnatural and irk-some processes required in attempting to teach them to speak, one is led, from the inconsiderable benefits obtained by these attempts, to wonder how their parents could have been induced to allow them “to go through so much to learn so little!”

Having considered the case of deaf-mutes as regards the peculiar evils of their condition and the means of the removal of these, I come now to speak of the school education which they require in common with persons who hear and speak. In all the American institutions for the deaf and dumb, the pupils in attendance are instructed in the ordinary branches of learning which are taught in our public schools; but are chiefly occupied in the endeavor to attain to a complete knowledge and use of *written language,* that by this means they may be introduced to the world of literature and books, and be able to communicate, by writing, with persons present or absent. Children who hear and speak learn to read written language by being taught the sounds which the written characters represent, which is sufficient to give them an understanding of the meaning of words; but as deaf-mutes have no knowledge of sounds, they can only learn to read intelligently by

translating the written words into their own language of signs, or into the natural language of action through which all speaking children originally learn spoken language.

The sign-language lacks the inflections of artificial languages, and is presented in a different order from that which is maintained in the use of the English language. The two languages are so diverse in their construction that the attainment of a complete mastery of the latter, through the medium of the former, is a task of very great 25 difficulty to the deaf and dumb, and is seldom perfectly accomplished. Most of our pupils acquire a knowledge of written language, while under a regular course of instruction, sufficient to enable them to express their ideas in an intelligible manner by writing, and to read understandingly books written in a very simple style. But it is rare that a congenital deaf-mute, on leaving one of our institutions, can read books of an elevated character with an entire comprehension of their contents, or express himself by writing, for a length of time, with entire correctness in point of grammar, phraseology, and style; and the written language of a considerable portion of our pupils is but a confused medley of words, put together with very little regard to the proper order of their arrangement or of the rules of syntax.

As seminaries for relieving deaf-mutes of the evils incident to their condition, and cultivating their minds and hearts, the American institutions for the deaf and dumb, conducted on the French system, are (principally on account of their superiority in the use of the sign-language) surpassed by none in the world; but as schools for teaching written language, which is the main business in which they are engaged, their success has not been all that could be desired.

All instructors connected with our institutions are very properly and anxiously inquiring, How can our pupils be brought to a better knowledge and use of the English language? An attempt to answer this inquiry, and to present my own theory on this point, will be the subject of the remainder of this paper.

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The best way to learn a language seems to be one of those secrets hidden, for the most part, from the wise and prudent, but revealed unto babes. Children learn language without studying it, but persons of a maturer age study a language for years without learning it.

A gentleman who had been travelling in France, on his return home, being asked what of all that he had seen in that country surprised him the most, replied: “The most 26 wonderful thing to my mind was, that all the little children spoke French so well.” Children unconsciously and insensibly, without any special effort of their own, learn the language of those persons with whom they associate, and, what is most surprising, if the persons with whom they associate use the language correctly, the child, in due time, employs all the inflections of the language, makes all the proper variations in moods, tenses, cases and persons without any special instruction on these points, and becomes, in fact, a little philosopher, grammarian, and philologist without aiming at or knowing it! The child learns the meaning of the words he hears spoken by the signs, gestures, expressions of the countenance, varied intonations of the voice, and particularly by the actions which precede, follow, or accompany the words. No artificial language can possibly be acquired without the use of a natural language with which to interpret it. The mother says to her child, “I love you,” and smiles, hugs, and kisses him, which makes the words expressive to his mind. His little brother in anger scowls, pushes him, and says, “I hate you,” and ever after the child knows the meaning of these words. His father says to the servant, “Shut the door,” and the child observes the action that follows and takes cognizance of the meaning of the phrase. In regard to the learning of abstract words, we may say that when a child has heard a word of that character used for a number of times he begins to have a fixed idea of its meaning and ventures himself to use the word in a similar connection, but never employs a word simply from having had it defined or explained to him.

In a manner similar to that shown in the examples given, he acquires all the language used in ordinary conversation, and whether he is of quick or of slow apprehension, in a short period learns to use the language with the same correctness as his associates use

it. It is to be observed from the examples given above that children are not taught words singly and unconnectedly, but in complete 27 propositions; they do not learn the meaning of the phrases from a knowledge of the words that compose them, but gather the meaning of the words from understanding the phrases of which they form a part.

In regard to the rules of grammar and the principles on which the language is founded, nobody ever tells the child, for instance, that he must use the article *an* before a vowel except in certain cases, or the article *a* before a consonant, or that plural nouns generally terminate with the letter *s,* but he makes these discoveries himself, lays down his own rules, and makes his own grammar.

There are only two distinct methods of teaching and learning a language: first, this natural method by which children acquire it by practice and usage; and, second, the artificial method employed in schools, by which the teacher attempts to analyze the language and bring the pupil to the knowledge of it by laying down certain rules and principles by which he is to be guided in using it, called teaching him the grammar of the language. This is the method employed in our higher schools and colleges in the study of the dead languages, and certainly is not the way to master those languages, as the results attained by this process abundantly prove. Luther says that probably no person ever arrived at the practical knowledge of a language by the study of the grammar of it alone.

Our system of teaching language is substantially the artificial method employed in schools, slightly modified and improved. We teach from the stand-point of a mature mind, giving to our pupils long lists of unconnected words and parts of sentences having no meaning by themselves; we philosophize, attempt to analyze the language, and to point out the principles on which it is founded, before the uncultivated minds we are attempting to instruct have any very clear idea that there is such a thing as language. With educational views similar to these, that erudite pedagogue, Mr. Solomon Lollypop, 28 commenced teaching Johnny and Tommy to say their A, B, C's. “These alphabetical symbols, young gentlemen,” said he, “are the elements of all literary knowledge, and in their various

combinations possess functions capable of transmitting from one mind to another every species of intellectual intelligence." Johnny and Tommy scratched their unkempt heads and said "Yes, sir."

The measure of success obtained from the system we employ is that which might be expected, and which others attain from using similar processes. A teacher in one of our institutions has placed under his charge, I will say, a class of twenty pupils, of different ages, capacities, dispositions, and cultivation. The task before him is, I will presume, in a course of six years to render these pupils proficient in the use of the English language. He labors zealously, faithfully, and with ability, according to the light given him, proceeding in the steps of his predecessors and according to the practice of his associates. The result in all cases and under all teachers is similar.

About one-fourth of the pupils of his class, on the completion of the course of instruction, being of superior abilities, having had some previous training and culture, and a good deal of practice in conversing with their hearing friends, are enabled to write on ordinary topics with facility and a good degree of correctness, rarely making any gross blunders of expression, and are able to read books written in a style of simplicity and clearness understandingly and with interest.

About one half of the class make occasional blunders whenever they write, and have less taste than the others for reading and less ability to read.

The remaining five pupils, possessing fair mental capacities, but having, it may be, peculiar, irregular, or ill-disciplined minds, fail almost entirely to comprehend the principles of the language they are endeavoring to 29 learn, make the grossest errors in expressing themselves by writing, and are able to gain very little information from newspapers or books.

I may add that where the class is composed partly of semi-mutes, or the pupils have been selected and placed together on account of their uncommon capacities for improvement, a somewhat better result than that stated above may be expected.

In some institutions these five unimproved pupils would be removed from the class in which they were originally placed and put into a class of a lower grade, or into what the pupils call “the dunce class;” but dull pupils differ from each other in the kind of instruction which they require as much as they do from those who make more rapid progress, and I submit to any teacher, whether, in case of their transfer to another class, the last state of these dull pupils is not usually worse than the first. There is nothing less commendable in the management of our institutions, in general, than the manner in which dull pupils in respect to their instruction are treated. Speaking children of the same grade of intellect completely master their vernacular language, and so could dull deaf-mutes master written language, if sufficient attention were paid to them, and they were taught in the right way. They ought to have the best teachers assigned them, be taught language by the practical method, by usage, and be instructed individually, and not in large classes.

All philosophical writers on the subject of the instruction of deaf-mutes agree in expressing the opinion that the nearer we conform our methods of teaching written language to those which nature employs in teaching spoken language to children who hear and speak, the greater will be our success. That we do not at present pursue this natural method to any great extent, may be inferred in advance from that fact that, at the very age when children best learn language by the natural method, they are not admitted to our institutions. The processes by which written language must be taught must of 30 course differ in some respects from those employed in teaching spoken language, but the general method may be the same.

I venture to lay down this general principle in regard to teaching language, either to deaf-mutes or to persons who hear and speak, that the very best way to teach a language to any person is for the teacher *to keep up a perpetual discourse* with his pupil in the

language he wishes him to learn, and in no other, until the pupil masters the language. The teacher of deaf-mutes should continually spell with his pupils by the manual alphabet, and continually write with them on black-boards, slates, or paper, in regard to events which may occur naturally, or which he may cause to appear to occur, or of which they may have been informed through the medium of signs, keeping ever in mind that constant repetition of the same phrases and a thorough retention of them by his pupils are the keys to success. All formal definitions or direct inculcation of rules and principles should be entirely avoided, at least in the first stages of instruction. Where the employment of signs in the school-room seems necessary for the imparting of new ideas or to make the meaning of the written language presented to the pupil more clear, he should not hesitate to employ them; but he should continually bear in mind that it is verbal language and not the sign-language which he is endeavoring to teach.

That teaching language directly by usage is practicable is proved by the case of Laura Bridgman and others. And that practice in conversing by writing is what our pupils chiefly need to promote their improvement, is indicated by the fact that many of them make more rapid advancement in the attainment of a correct use of language in vacation than in term-time, and that some who are quite indifferent writers on leaving the institution, subsequently, by constant conversation with their friends by writing, attain at length to quite a correct, and even an elegant use of language.

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But to teach by the natural method it is absolutely essential that much of the instruction given should be addressed to the individual. Teaching language by usage is not practicable to any great extent in large classes. All pupils will not pay the same attention, and some require more constant repetition than is required by others, and a different kind and amount of instruction. No class of pupils where a good deal of special training is required, as is the case with the deaf and dumb, should be larger than an ordinary family. The family is the type and the true model of the school. Who first originated the idea and established the custom that a class of deaf and dumb pupils should number about twenty?

I think that this practice of having large classes has done more to retard the progress of our pupils than almost any other.

It is a striking fact in the history of the education of deaf-mutes that some of the greatest recorded successes in their instruction are among the earliest. The pioneers in the cause, Ponce, Carrion, Amman, Pereira, and others, certainly brought their pupils to a higher point of attainment than is usually reached in our institutions for the deaf and dumb; not that they employed any peculiar and wonder-working processes in teaching their pupils, but because they had but few pupils to teach, a long time in which to teach them, and taught them language, as I suppose, mainly by practice and usage. And at the present day, whenever we hear of a deaf-mute who has made surprising attainments, it is almost invariably some one who has received a great deal of special individual instruction from his parents, a private teacher, or some other source. Clerc and Massieu, although they received their education in an institution for the deaf and dumb, never would have attained to the rank they held as scholars, had they not been special favorites of their gifted master, and received a great deal of special instruction and training. In the Northampton Institution for the Deaf and Dumb, where the teachers have attained to such 32 a degree of success (under what I consider an erroneous system) as to surprise some instructors of other institutions, it is to be observed that all the classes are small, and much of the instruction personal and individual.

Small classes would of course involve a greater expense and require a greater number of teachers to each institution than are now employed; but it is a favorite maxim with us, and I believe a just one, that whatever is necessary for the promotion of the best interests of deaf-mutes the public are willing and ready to grant; that whatever ought to be done for them can be done. The expense, however, under the natural method of teaching language, need not be so great for the individual teacher as is required under our present system. To teach language scientifically and philosophically with marked success, through the medium of signs, requires in the teacher histrionic abilities sufficient to give distinction on the stage as an actor, a thorough knowledge of the philosophy of language and of the

mind, a general knowledge of all the terms used in all the arts and sciences, and in all the various operations of life; in fine, an education and culture liberal, exact, and extensive; and, of course, such a teacher must be paid according to his acquirements. But to teach language by the natural method, a nurse, provided she uses the language correctly, is as good an instructor as a philosopher; for all that is required of her is to keep talking, and to keep her pupils talking, and in time the end aimed at is reached.

My ideal of a model institution for the deaf and dumb would be one that should have within its walls not more than fifty pupils, divided into classes of about half-a-dozen members each, remaining under instruction ten years. Each class should be under the charge of a zealous and faithful female instructor, who should teach her pupils written language directly by usage, and spoken language to those pupils who are capable of acquiring it. The institution should have a male principal and vice-principal, men of liberal education and accomplished 33 sign-makers, who should lecture daily to the pupils in the language of signs on all the various subjects calculated to enlighten or interest them. The pupils should be allowed to talk by signs at pleasure, except in the school-room, where verbal language should be considered the proper mode of communication to be employed.

In such an institution, from the fewness of its numbers, the wants and requirements of each individual pupil would be likely to receive more special attention than is now generally given, and the physical, moral, and intellectual improvement of the pupil would be likely to be much greater than in larger institutions.

I have now stated my views as to the best methods of instructing deaf-mutes, especially as regards the acquisition of written language. For obvious reasons, I have not had opportunity fully to test these theories by actual practice; but I am confident, from my own experience in the employment of the methods proposed, as far as it has extended, that if ever our pupils as a class leave our institutions accomplished proficients in the knowledge and use of written language, it will be through a reform in the direction here indicated—

that of smaller institutions, smaller classes, and the teaching of written language directly by usage.

SHALL WE ABANDON THE ENGLISH ORDER? BY E. G. VALENTINE, B. A., DELA VAN, WISCONSIN.

The assumption that signs should be rendered in the order of the English language has elicited an animated discussion during the past year. In this article, it is my purpose to review the various arguments, *pro* and *con,* touching this subject. I shall take the liberty to quote and comment upon remarks made at the Indianapolis convention, and, in like manner, I shall notice certain articles on the subject written since that time.

In speaking of the sign-language, President Gallaudet said: “I do not defer to any one in my admiration of the 34 sign-language. It is a beautiful language; I admire it. I admire the grace of it, the force of it, the rhetoric of it. I admire many things about it.” So far as I am concerned, I gladly assent to all that has been said favoring signs as a means for deaf-mute instruction. Without this instrument, the teacher of the deaf-mute would find the work of instruction to be most weary, indeed; and I would not deny the assertion that the deaf and dumb cannot be successfully instructed without the aid of signs. And yet our opponents will tell you that we wish to “obliterate” the sign-language, and that, if signs are rendered in the English order, “we shall lose, at length, our language of signs altogether.” We might as well affirm that a man will eventually lose the use of his voice by speaking in the language with which he is most familiar. So long as there are deaf-mutes, just so long signs will be used as a means of communication. I do not now refer to the sign-language with reference to any particular order of expression, for it has been hitherto, and will be hereafter, shown that signs have no natural order of expression, but, bearing the same relation to written language as the human voice, they can, like it, be adapted to any language, or else they are a failure.

Obliterate the sign-language? We might as well attempt to destroy the discoveries of Newton or Franklin, of Fulton or Morse, as those of De l'Epée and his coadjutors. Our opponents say that we desire to annihilate the whole structure of the sign-language. Not so by any means. We only seek to eradicate the present defects in the structure, and make the sign-language what it should be, a *sure* and *safe* means of right instruction.

What is the object of deaf-mute instruction? Says Dr. Gallaudet: “The object of the instruction of the deaf-mute is to prepare the deaf-mute to live in a world of hearing and speaking people, and sustain himself.” That implies a good understanding of our language. Whatever, then, tends to retard the deaf-mute's progress in gaining a fair knowledge of the English language 35 guage should be rejected, and whatever tends to accelerate his acquirements in this direction should be adopted; and, of two systems, the one which best enables him to acquire the language of words should certainly be followed. It would seem that our friends, in their zeal to uphold a certain system, forget this great object, which we should all have in view.

They talk of our destroying the beauty and grace of the sign-language. This we do not admit; and yet suppose we grant it. Of what use is a pretty, graceful little machine, if it have not the power to do the work designed for it? Is it our object to cultivate the sign-language as a fine art? If it is, our institutions had better be turned into schools for sign-making, and our pupils be graduated accomplished sign-makers, to the sacrifice of all other necessary acquirements.

There seems to be a misunderstanding in regard to the terms “natural order” and “natural signs.” What is the meaning of these terms? In a previous essay, (see the proceedings of the Indianapolis convention,) I endeavored to prove, and my arguments have not been controverted, that the sign-language has no natural order. What do the inversionists have to say on this point? Says one: “Now, as to whether the present order is the natural order or not is of no consequence; it is an existing fact there is a sign-language, and it is in the inverted order; it is no matter whether it is in the order of nature or not.” We claim, then,

both by force of argument and by permission, the right to assume that there is no such thing as a “natural order” of the sign-language. Our opponents have no right to use the term unless they can conclusively prove its reality. But my friend says: “It is an existing fact there is a sign-language, and it is in the inverted order.” Again, he says: “If you would avail yourself of the English language, or any other idiom of speech, you must avail yourself of what exists, and not of what does not exist.” Many “existing facts” there are that cannot stand the test of a fair examination. We believe there are certain 36 defects in the manner in which the sign-language is used in several of our institutions, and we claim the privilege of inquiring into this matter, and are not willing to be governed simply by “existing facts.” They tell us that this theory of inversions came into use only about thirty-six years ago. It would seem that they draw conclusions from “facts” which they themselves have invented. A word in regard to the term “natural signs.” In speaking of certain essential qualifications of the teacher of the deaf and dumb,” Rev. T. H. Gallaudet once said: “A teacher of deaf-mutes cannot be thoroughly qualified for his profession without being master of the language of signs— *natural,* as expressed by the countenance, gestures and attitudes of the body; and *artificial,* as far as art has enlarged and perfected this natural language.” The above defines the term “natural signs” better than I can. The term is often used in the sense of signs in the inverted order. Natural signs have nothing to do with the theory of inversions. I have noticed these matters that we may not be deceived by the unfair use of terms.

It has been strongly urged that the inverted order of signs is the natural order of thought. It is said that the deaf and dumb think in this inverted order, and that, in this respect, the sign-language “follows the methods in which all minds conceive of objects and actions.” This “ *ignis fatuus* of deaf-mute instruction” has been ably commented upon by President Gallaudet, (proceedings of the Indianapolis convention, pages 62 and 63; also the *Annals,* vol. xvi, pages 31 and 32,) and it is with no little diffidence that I attempt to add anything to his remarks on this point. It is also claimed that signs rendered in the inverted order “are pictorial,” and are subject to all conditions of a picture; and, *vice versa,* that signs rendered

in the order of the English language “are not, and do not pretend to be, a reproduction of events as they occur in nature;” and further, that, “in their use, the idea of a picture is impossible.” Our 37 opponents seem to have risked their cause almost, if not altogether, on the above assertions; hence I trust I may be pardoned for considering these statements somewhat at length. These statements, and the arguments supporting them, are so similar in many respects, that I shall comment upon them connectedly.

It is well, in the first place, to understand what we mean by *thought* —one of the most indefinite terms in any language. I apprehend it, as here used, to mean what is defined by the logicians as the *connection of ideas.* But in what manner are ideas combined? Is it mere succession, one idea succeeding another in rapid sequence, or do they co-exist in the mind? In other words, is thought the concatenation or the unification of ideas? I think the latter. No succession, however close, is sufficient. If one idea passes from the mind before another enters, it does not matter whether it be at the interval of an hour or the thousandth part of a second; nothing avails but an absolute co-existence. A thought expressed is a sentence, and consists of the attachment to one chief substantive, the subject, directly and incidentally, of various limitations, specifications, qualities, modes, acts, states, etc., themselves variously modified, but all so related as to be capable of an absolute co-existence in the mind. This causes the natural limitation to the length of a sentence. It must not be so long that the mind is unable to retain it till its close, when the various elements may be combined in one. Were thought mere succession, there would be no limit. This is more obviously the case in those thoughts which admit of representation under physical forms, or, to use the comparison so often and so appropriately used, those which may be pictured to the mind. To illustrate, we will take the sentence, “The horse jumps over the fence.” Here we do not think first of a horse, then of a fence, then of the action of jumping, but we think of a horse in a certain act, that of jumping, and this act limited as to place by its relation to the fence. When we conceive of a horse, 38 it must be in some state, in some position, and the sooner this is limited by the verb the better. What should we say of the painter who, in painting this scene,

should first give us a horse, irrespective of the contemplated action, standing in a natural position; then a fence, and then introduce the idea of action? But this can be done only by the obliteration or modification of the capital figure of the picture; yet this same thing is done in employing the so-called natural order in picturing this scene to the deaf-mute. We care little for the order in which the artist places his figures on the canvas; our concern is with the completed picture; and so, in the sign picture, I apprehend that the order in which the figures are presented to the eye and mind affects the facility of conception little, provided the figures are properly given and each one in turn completed before going to another. In any thought presented under physical forms, there is no order of thought, but the completed picture is seen as a whole. Figures which compose the picture may have previously existed in the mind, but the essential conditions which go to make it up are wanting until the last element is given. There is no clear conception till the sentence is complete. There is no picture till the last necessary touch is given. Nor must we rely too much on the supposed order of perception. To recur to the favorite board example: “Suppose I strike a board, I do not strike the vacant air, seeing nothing and having no idea of anything before me until after I have struck, when suddenly a board rises up to receive the blow. I first see the board, I intend to strike it, and with it before my sight I strike. In exact conformity with this necessary order of nature and of fact, in describing this in signs, I say, ‘I a board strike.’” The force of this illustration, if it has any, lies in the assumption that this *is* the “ *necessary* order of nature.” Suppose, instead, one hits his head against a beam, in the dark; I opine that then this “necessary order of nature” is scarcely apparent; on the contrary, he first hits something, which 39 something he afterwards discovers to be a beam. If we were omniscient, we might assume that the object of action was always apparent previous to the act, but, in the present state of things, we run against a good many beams of whose existence we were not previously aware. Again, “A man found a diamond.” Did the man first see, intend, and with it before his eyes, etc.? Or again, “A man shoots a bird.” We have to deal with this picture as seen by the speaker. We suppose a man shoots into a flock. The one describing cannot know at what particular bird the man shoots. Or suppose the man shoots at a bird in a tree, which the speaker does not see.

What, now, is the “necessary order of nature?” He sees a man, the man shoots, he hits a bird; and, “in exact conformity with this necessary order of nature and of fact, in describing this in signs,” he says, “A man shoots a bird.” This board illustration, and others that have been cited of a like character, deal with but one class of phenomena, and that a very limited one.

It is said that if the deaf-mute thinks in the inverted order, his language will be in that order. If he thinks in the inverted order, he does it by force of habit only. No good reason, it seems to me, can be given why this order should be used, and yet by some teachers the deaf-mute is encouraged to use it day after day, and made to believe that he must use it in order to master the English language. The mind of a child is very pliant, and he can be taught to do or think almost anything. If you teach him that A is B, he will *think* so till he is told to the contrary.

It is further said that if deaf-mutes continue to use signs in the inverted order, “in spite of all efforts to the contrary,” then our argument for the change fails. Our experience is that they will not persist in rendering signs in the inverted order. The system we advocate has not had a fair trial; it has not yet come into general use, although it is gratifying to know that it is rapidly gaining favor. Yet this present inconvenience to which 40 we are subjected does not invalidate the position we have taken, and cannot reasonably be used as an argument against us.

If “all minds conceive of objects and actions” in the inverted order of the sign-language, it seems very strange indeed that so many other languages ignore this all-essential qualification. But I must not dwell longer on this part of my theme, for there are other points which deserve notice.

In an article favoring the inverted order of the sign-language, I find this passage: “It should be distinctly remembered that words are not only not given in natural signs, but that they are not even suggested.”

As a rule, signs must be explained to be understood. We write on the slate the word *horse,* for instance; then we call the pupil's attention to the object, and finally, for convenience, we attach a particular sign for the word. Thus we go on explaining word after word, and attaching the corresponding signs. In this manner the word and its sign become inseparable in the mind of the mute. Is not this true? If you make the sign for the word *horse,* the pupil will spell the word; and if you spell the word, he will almost invariably make the sign for it. Signs, unless they are first riveted to some visible (not visionary) language, are just as useless as the muscles of an arm after the arm has been separated from the body. If the grand object of deaf-mute instruction is to perfect the pupil in the use of the English language, and all admit this, then what benefit is to be derived from using signs that do not even suggest words? And, since words and their corresponding signs are so intimately related to each other, why not render those signs in the same order you would the words could the child hear? I have just as much right to claim that spoken and written language are two separate and distinct languages, having different orders of expression, as to claim a like dissimilarity between the sign and written or word language. What is the difference between the sign and 41 vocal language? I have yet to learn why there should be any difference. But grant that “natural signs” do not even suggest words, and also that our object is to teach the deaf-mute the structure of our language; then it seems to me the sign-language is no help to us whatever, but a positive injury, and the sooner we discard it altogether and substitute something that will suggest our language, the better for the cause in which we are engaged.

It is claimed that if signs are rendered in the order of English words, deaf-mutes cannot understand them. I would answer this objection as our opponents answer a like objection made against their theory, by giving some practical examples which I have had prepared and intend to append to this article. “But,” it is said, “even if your pupils can write a story from signs rendered in the English order, it is all machine work; the whole thing is mechanical; your pupils are automatons,” etc. To this I reply, You give deaf-mutes the credit of being able to perform that which you yourselves cannot do. If I were to read to

you a passage, do you think you could write it out word for word? And yet that would be no feat at all compared with that which you suppose the deaf-mute can do; for, if he does not understand what we are rendering, then to write it out mechanically would be the same as for you to write out a string of miscellaneous words, bearing no relation to each other, on hearing them read once or twice. There are a few noted instances on record where men have been able to do this, but these are exceptional cases. If a story be rendered in the English order of signs, and the pupils write it out in the main correctly, that is proof enough that they understand it. Besides this direct proof, we have other incidental evidences that we are understood by our pupils. They ask various questions concerning the story; they appreciate the point of the story, and often compare it with other stories they have before heard.

42

After rendering the following sentence in the inverted order, “A boy catches a cat,” it is asked: “Does the deaf-mute not know what it means, and is there any difficulty in his modelling other sentences after this form?” Now, what, I ask, is this “modelling” but a mechanical process? I am willing to submit to the good judgment of my readers as to which is the more mechanical—rendering signs in the order of English words, and requiring the pupil to write out his ideas, or rendering signs in the inverted order, and requiring the pupil to convert them into written language, using a model in the operation.

At the Indianapolis convention, Mr. Porter said: “The main rule, probably, is this: that you must follow the order of pictorial representation—the order by which you can most successfully represent to the imagination what it is that you wish to describe. That, of course, need not always confine us to a single invariable order.” He gave this sentence as an illustration: “An old man found a rude boy on one of his trees, stealing apples.” He then asked whether we “could get that idea into the mind of a deaf-mute by taking the signs in the order of the words of the English language.” Did he not himself answer the question affirmatively? Let us see. He said: “You may begin by picturing first the old man, (an old man,) then the old man finding something, (found,) and then indicate that it is a boy, (a

rude boy,) and then you represent the boy as on an apple-tree, (on one of his trees.)" It seems quite natural to follow the English order, after all.

After giving several paragraphs written by deaf-mutes, Mr. Keep says: "We would suggest and invite a comparison of the foregoing versions, in point of variety and correctness of style, with an equal number of similar off-hand exercises of a college class in Latin or Greek, upon a group of ideas given by the professor in rapid extempore talk." The comparison so often made of the English of the deaf-mute with the Latin or Greek of the classical 43 student is not apposite, for the following reasons: first, it assumes one of the points at issue, viz: that English should be regarded as a foreign language to the deaf-mute pupils of our American institutions; and, secondly, admitting that it should be so regarded, it is, unlike the Greek or Latin, a language in every-day use. It would be more accurate to compare it with the English of an educated foreigner, dependent upon it in daily intercourse, and that, too, without regarding any difficulties in pronunciation on the part of the latter; or, more accurately, it should be compared with the written English of such a foreigner, and that, too, when the writing of English is an habitual matter with him; and this will, we think, be distinguishable from that of a native chiefly by its greater correctness and precision.

It is said that if we admit that signs rendered in the inverted order have the power to give clear ideas on such subjects as children would be interested in knowing and are capable of understanding, then we "shut ourselves up to the absurdity of saying that a perfectly clear idea of the thoughts contained in a sentence may be communicated to the mind, yet the sentence itself, as given in signs, not be translatable into verbal language." Remarks concerning the above would seem to be uncalled for, for does not the author shut himself up to this same absurdity, when he says, (*Annals,* vol. xvi, page 23:) "A language, it is well known, may be understood and read, when there is no ability whatever to express one's thoughts in it?"

It is asked how we may secure from our pupils the greatest possible use of language. I know of no better way than to require our pupils to *use* language as much as possible. I would use signs cautiously and sparingly, and depend upon written language and dactylology in communicating with our pupils. If deaf-mutes have really acquired an order antagonistic to the English, I would get them out of that rut as soon as possible; and I would have our pupils appreciate the great importance to them of mastering our language.

44

We are accused of being ignorant of the sign-language, and this is given as a reason why we complain of its inversions and desire its reconstruction. I deem this a strange argument for our opponents to use, and only demonstrative of the weakness of their cause. So far as I am concerned, I make no claims as an expert; but, in behalf of others who oppose the theory of inversions, I would say that they are numbered among the finest sign-makers in this country. This is a well-known fact.

Another objection to our theory is, that it does not give exercise to the judgment. As has been so often stated, the first and chief object of deaf-mute instruction should be the mastery of the English language. The deaf and dumb acquire this, at best, under great disadvantages, and they certainly should not be required to bear any additional burden. What should we say of the educator who proposed to teach the speaking child two distinct languages, and “throw him upon his own resources and judgment in giving to each language its proper character?” The sensible parent would object that he thought it better for his child to acquire *one* language first, and then there would be time enough to gain the “important incidental advantages” of learning a new language.

It is asked how the deaf and dumb may be induced to use this changed sign-language. Says one: “Teachers may use it in school, but who is to secure its use by the deaf and dumb out of school?” If we can secure its use in the school-room—and I know this can be done—then our object is in the main accomplished. They will, however, I am confident, discard the use of signs in the inverted order altogether. The change may be gradual; but

as they become accustomed to the English order, and daily familiarize themselves with it, they will eventually prefer to use it. Discourage them from using, instead of encouraging them to use, the inverted order, and we need have no fears but that they will soon abandon the habit.

It is a wonder to me that some members of our profession so strenuously advocate the use of the sign-language 45 at all times, when its imperfections are so generally admitted. I do not now refer to any special order in which it is used. One gentleman, who so earnestly urges the claims of the sign-language, says: “Trains of reasoning are not at home in signs. The range is that of partially-developed minds of children. There is, of course, a wide gulf between such a language as this and the cultivated and refined languages of the world.” By using such a language as above described there cannot be a very great opportunity for the exercise of the judgment. Again, the same writer says: “As things are, the object being to bring the pupils of our institutions at the earliest practicable time to the use, and exclusive use, of English, it is doubtful whether the sign-language will ever be much farther advanced than it now is.”

In an able article (*Annals,* vol. xvi, page 171) written by Mr. Angus, himself a semi-mute, I find the following: “After the sign-language has served the purpose for which we employ it, its continued use retards, if it does not render impossible, the more complete mastery of the common language which it is one of our chief purposes to have the deaf-mute acquire.” Further on in his article, Mr. Angus says, in substance, that in early times educated deaf-mutes, after leaving school, were compelled, on account of the smallness of their numbers, to depend upon common language either in writing or dactylology, and hence they became more familiar with it; but that graduates of the present day, being many, have abundant temptation and opportunity to retain the sign-language, and develop a sort of clannishness that renders their continued improvement in language after leaving school nearly impossible. He further says it is desirable that deaf-mutes be afforded this source of pleasure, but to be regretted that it retards their progress in language. Mr. I. L. Peet says: “As far as this, [seven weeks in an institution,] the intelligent parent, by

painstaking, could have taught the child at home without the intervention of signs—a fact which furnishes a strong presumption in 46 favor of this being the natural and best order of initiating the deaf-mute into the study of the English language."

It would seem, then, that the sign-language is not only not perfect, but that it is an inferior language, and that a "wide gulf" exists between this and the English language, since the latter is one of the "refined and cultivated" languages. It is further acknowledge that this language will never be much farther advanced than it now is. By Mr. Angus, the continued use of the sign-language is claimed to be positively injurious to those desiring to improve in the use of English. Mr. I. L. Peet is of the opinion that parents may teach their deaf-mute children all that they would get by two months' instruction in an institution, and after that time, he says, the teacher "may avail himself of the assistance which signs give in interpreting the meaning of words." In view of the above and abundant other testimony, was not Dr. Gallaudet justified in saying that the sign-language "is a very dangerous thing," and that we should use it "as little as possible?" Signs render valuable assistance in instructing the deaf-mute in language, provided they be carefully and properly used; otherwise they are injurious. Of this there can be no question. We base our assertion on statements made both by our friends and opponents, and on the testimony of deaf-mutes themselves. It may be asked what this has to do with the main question under discussion. Simply this: if the sign-language is acknowledged to be an inferior and deficient language, incapable of expressing thoughts beyond the grasp of children, and if the excessive use of this language is shown to be positively injurious, then we are justified in protesting against its being placed on an equality with the English language. In short, the sign-language is a dependent and subordinate language, and should be so considered.

I had hoped to add to this essay a few practical examples, going to show that deaf-mutes can be successfully instructed by the English order; but as my article is 47 already much too long, I will omit them; yet shall be most happy to show the work of my class at any future time.

In conclusion, allow me to quote two paragraphs in sympathy with my views. They well answer the question proposed at the head of this article.

Says Dr. Gallaudet: “I see nothing to be gained by the inverted order, as it excites in the minds of deaf-mutes something that is constantly fighting against the work of instructing them in the use of the English language. We had far better work a little harder, and reach the mind of the pupil in the order of thought that he has to use in his general contact with men.”

Says Mr. Gillet, of Indiana: “Why should we teach language to the deaf, as we do not teach it to our children, as we did not learn it ourselves, as all the generations of men did not learn it? Why except them from the universal system of all times and all nations? Deafness does not alter the nature of the mind, nor change its modes of activity.”

A FEW WORDS ON TEXT-BOOKS, ETC. BY WILLIAM H. LATHAM, M. A., INDIANAPOLIS, IND.

Several papers * have been called forth, in part at least, by an article which appeared in the *Annals,* vol. XV, page 104, entitled “Difficulties Attending Deaf-Mute Instruction.”

* “Progressin Deaf-Mute Instruction.” by H. P. Peet, Ph. D., LL. D. (*Annals,* vol. xv, page 209.)—“A Practical View of Deaf-Mute Instruction,” by Isaac Lewis Peet, M. A. (*Annals,* vol. xvi, page 69.)—“We Are Not Retrograding,” by W. W. Angus, (*Annals,* vol. xvi, page 160.)

Exceptions were taken to the article, more especially to the hypothetical statement therein made, that the teachers of a former date were more efficient than those of the present day; and to the deduction thence drawn that the text-books of late years so generally in use were of 48 doubtful utility, inasmuch as this greater success was achieved without the aid of these books.

As to the question whether former teachers did excel those of the present time I have nothing to say. When I ventured the hypothesis, I did not believe that such was the case, nor do I now believe it, for I have no means of knowing. I leave the question to be settled by those more particularly interested, who are doubtless fully competent to the task.

My sole object in writing the paper was to show that there were good and sufficient reasons why the teacher would not accomplish all he might desire, or all that might be expected of him. I have, as yet, seen no reason to recede from any position therein taken, or to modify the opinions therein expressed, but rather to confirm them.

The same difficulties, both theoretical and practical, exist now, as then; and the same obstacles, more clearly defined it may be, lie in the way of the greatest success. The question naturally arises, without drawing any comparisons, Are we really advancing, as we ought to be, in the theory and practice of deaf-mute instruction? Is our progress such as to warrant the discontinuance of all further effort in the way of advancing the true interests of the deaf-mute?

I, for one, am not willing to admit that the ultimatum has been reached, nor that *finis* has been appended to all text-books, without the chance of addenda, supplement, or errata. In my former article, I referred not so much to the text-books now in use, as to the want of proper books to supply the place of our chaffy common school-books in our more advanced classes. Yet I trust I may be allowed to express my opinion as to the merits and utility of the text-books so long and so generally in use, and to which all of the above-named writers refer, and upon which they lay such particular stress. Should a book which may have the precedence in point of time and which may have had a commendable degree of success, 49 preclude the possibility of any better book being made? Should a system of instruction pursued by a principal, however *expert;* be insisted upon, without a thought that some other mode of tuition may be equally, if not more, efficient? Should public opinion be forestalled, and all debate cut off upon a question of such import?

That we, as teachers, are not accomplishing all we might desire, and that there are defects and hindrances somewhere in the way of attaining this greater good, no one can deny. In my former paper I hinted at some of these obstacles; and I trust I shall be excused if, in the present instance, I take a wider view of the subject, even if it may seem to conflict with preconceived notions and opinions. And if my idea was not then fully comprehended, I would now give forth no uncertain sound. I stand committed to no theories and to no system of instruction, so called. My opinions are serious convictions, the result, as before said, of my own observation and experience in the school-room.

The writer of the first-named paper, while he is not willing to admit the superiority of former teachers, seeks to throw off the onus from the text-books in question upon the “mediocre teachers,” who, as he intimates, are not competent to their “proper use.”

The writer of the second paper would hold the rod over the teacher, and, if he failed to follow instructions, would dismiss him. How could we expect any but “mediocre” teachers under such a *régime* as this? Must the teacher lose his individuality? Must he become a mere automaton, to be wound up and set agoing like a clock?

I believe in system, but not in mere routine, as here set forth and inculcated. I do not believe in following a beaten track, though guide-boards be set up, and though the path be smooth and easy, if, by stepping aside, we may gather fruits more appetizing and more wholesome. I believe that a teacher of ripe experience is a competent 50 to decide what is best in particular exigencies as a principal, though he be an *expert;* and I ask, in all sincerity, will not the same rule which the writer applies to the teachers apply with equal propriety to the principals of our institutions? There are teachers who have continued such not altogether from necessity, and who have sought to perform their duties zealously and faithfully. Shall such teachers be condemned, forsooth, because they may have deviated from the beaten path, and dared to think and act for themselves?

To return to our text-books. Is it not a little singular that there should be such a uniformity of errors with the deaf-mute that they are designated as *mutisms* —that the teacher of the more advanced classes should be called upon from the year to year to correct the same stereotyped edition of blunders, especially when there has been such a diversity of teachers? Is this defect owing to any peculiar mental condition of the deaf-mute, or is it owing to the imperfect mode of instruction based upon these text-books? As before said, no two teachers pursue precisely the same course. The same books have been used from year to year, and doubtless properly used. Why, then, these defects, if they are not traceable to the inherent defect in the mode of instruction, as commonly pursued in our schools? I do not, of course, forget those extraordinary instances of success to which every teacher of extended experience looks back, I doubt not, with as much complacency as the venerable writer of the first article named, or his worthy successor. There are pupils, may classes, who will learn despite the text-books or the teacher, be he as dull as he may. These, however, are exceptional cases—bright oases in a desert of dullness. I refer to the great mass of deaf-mutes, who have to be lifted up, step by step, with untiring effort on the part of the teacher. *Hoc opus, hic labor est!*

Does the teacher here accomplish what he might, and is the deficiency owing altogether to the teacher? I think not. Do the text-books now most commonly in 51 use meet the desired end, in the estimation of teachers generally; and is the system of instruction based upon the principles set forth in these books, especially in the earlier period of the course, the best? These are questions in which every conscientious teacher of the deaf and dumb is interested, and questions, too, which should be regarded above all personal considerations.

The books to which I more particularly refer have had a fair and impartial trial; their merits have been most fully set forth from time to time, and I am confident they have been properly used. Do they accomplish all that is claimed for them? Were I permitted to criticise these books, I should say their principal defects were *verbiage,* or a plethora

of words, unimportant phrases, and formulas; that their arrangement was illogical and arbitrary; and that their use, even their proper use, was calculated to engender and foster idioms or mutisms.

The author, in common with those of all elementary books with which I am conversant, seems to proceed upon the idea that a large vocabulary of names and qualifying words should be memorized at the outset, as a sort of stock-in-trade, to be drawn upon as the pupil advances. And in furtherance of this idea the writer of the second paper refers us back to our great progenitor, as his authority for adhering to this plan. As much as distance might lend enchantment, I must confess I cannot go behind Adam for a precedent. He adheres to the system based upon this idea because it has the advantage of *experience,* and he would have no innovations. What improvements have ever been made without innovations?

I consider the idea a mistaken one, involving not only a loss of time and a waste of labor both on the part of teacher and pupil, but as detrimental to the best interests of the latter. There is no difficulty in the way of the pupil's learning words. He runs, as it were, to words, and the teacher has constantly to fight this tendency. Why not utilize words at the outset? Why is it not as easy for the beginner to learn understandingly the proposition, 52 *A cat catches a mouse,* or, *A cat licks milk,* (I care not whether the cat be black or white,) as to memorize the disconnected words, *cat, dog, horse?* And, if he can do this, which I fully believe, would it not appear far more reasonable and economical to adopt this mode of tuition—making the simple sentence, consisting of subject, predicate and object, the starting-point of the process; modifying and enlarging the proposition as the pupil progresses? I believe that qualifying words and the varied adjuncts of the sentence would be more readily and more understandingly learned in this way than in any other.

Even if the process seemed at first more difficult, would it not be advisable? *Habit* with the mute is everything, and, if he be set to utilizing material at the start, to writing propositions and connected language, be the process never so difficult, who will venture to say that

in a given time he will not have learned a series of sentences and every-day phrases as a part of the warp and woof of his more complete education? His attainments will not be measured by the number of pages he may have gone over in the Elementary Lessons, but he shall be able to write a connected composition; while in the usual mode his slate would have been filled with disconnected words, *crooked sticks, long benches, et id omne genus.* I think pupils have altogether too many of these long *forms.*

To say that this process involves the use of the verb, and is therefore impracticable, is a *petitio principii.* What is the verb but the name of an action, and ofttimes more significant to the mind of the pupil than the name of an object? Even if, as the venerable writer intimates, (note 12, Dr. Peet's Elementary Lessons,) an “earlier introduction of the verb enhances the difficulty,” why not at once put forth the effort and overcome the difficulty?

We all know that, as pupils are now taught, the verb, with its varied forms, is the great stumbling-block in the way of the deaf-mute. This idea of the author hardly seems consistent with the directions to parents, which we 53 find in his Twenty-seventh Annual Report, pp. 27, 28, and 29. There he advises parents to teach their children before coming to school, not only *verbs,* but *sentences,* such as *Feed the pig; Call father to dinner; Uncle John will come to-morrow; I will give you some apples,* etc., and he says this will be no very difficult task. Furthermore, he states that the deaf pupil thus taught at home “ *will far outstrip* ” one of equal capacity who has not been thus taught. Is not this virtually an admission of the point at issue? The writer certainly could not mean that the parent at home can accomplish what the teacher cannot do in the school-room, with the aid of the Elementary Lessons!

It would seem, however, by reference to note 12, that “some very respectable teachers” had introduced the verb much earlier. It has been a question with me whether these same “respectable teachers” were not those who had had the greater success at a former day.

I also hold that the author of the Elementary Lessons, in common with others, commits an error in introducing the verb under the form of the participle, for the reason, as he says, that “the participle forms a connecting link between the verb and the adjective.” This may be a logical deduction, but it is wrong in theory as regards the instruction of the deaf-mute.

The participle thus taught acquires the primary signification of the verb, and as such, by constant repetition, fixes itself in the mind of the pupil, and becomes a fruitful source of one form of stereotyped blunders.

For example, the author, it may be, gives the picture of a boy in the act of shooting a squirrel, and so designates it. The act, as represented in the picture, is precisely the same as he sees performed at home by his brother; and as the verb *is* subsequently becomes joined with the participle, as the “present actual tense,” the pupil, in describing the act, writes, *My brother is shooting a squirrel,* for he has thus been taught to write FROM THE BOOK. It is no easy matter to correct this *idiom,* as all teachers will admit. I have had repeatedly to correct this same 54 mistake in a class of *seven years* ' standing. It may be said that the pupil ought to know better. He does know better, but the habit has become fixed from early tuition, as every teacher of the older classes knows to his sad experience. Whence this idiom and others depending upon it?

In the first place, to the pupils, as he writes, all action is before the mind as present action, and he, without thinking, so expresses it. This is evident enough. We turn to the Elementary Lessons, and we find that present action is designated by the present participle *in extenso.* The pupil has thus learned it. We visit a class-room of beginners, taught *secundum artem,* and we find their slates filled with present participles, day after day; and the form of expression thus assiduously taught becomes a fixed mental habit with the pupil. I have often had whole exercises carried through with the present actual tense, and can account for the *idiom* in no other way.

A boy was shot a squirrel, past action, a form of expression with which all teachers are familiar, is a legitimate logical sequence of *A boy is shooting a squirrel,* present tense, the *rationale* of which appears simple enough; *was* is the past of *is,* and *shot* the past of *shooting.* If it requires the combination of *is shooting* to designate present action, *was shot* is necessary to designate past action. Further than this, the verb *is,* by this association with other verbs, loses its distinctive character, and becomes a mere adjunct, and it is with great difficulty that it can afterwards be taught in its true sense. The experience of older teachers will bear us out in this assertion. Need we wonder whence come mutisms?

Had the author, in describing the act, used the verb in its primary meaning, as he should have done, and said *A boy shoots a squirrel,* he would have been correct, grammatically and practically. The word *shoots* is strictly descriptive of the act, and the pupil, having so learned it, would use it correctly, and the idiom be avoided. Let the participle be taught as a modification of the verb, and not the verb as a modification of the participle.

55

Are mutisms necessary in the abstract, or in practice? Are they natural to the deaf-mute, or are they acquired? If natural, why so? If acquired, in what way acquired? Is there any more necessity for the deaf-mute, if correctly taught, to use idioms, than for speaking persons to use vulgarisms, or inaccuracies of expression? Are not both alike the result of habits acquired in early life?

The speaking person, if he is accustomed to hear correct language, will use such language from habit; while, if he becomes familiar with vulgarisms, or crude expressions, they will become part and parcel of his vernacular, so much so, that we can designate the place of his nativity by his speech alone, and no subsequent effort can wholly correct this habit. I hold that the same is pre-eminently true of the deaf-mute; that idioms acquired in the earlier part of his pupilage will cling to him as a part of his mental fabric, and that the most persistent effort of the teacher can never wholly correct these defects.

Do not some teachers, proceeding upon the supposition that mutisms are the necessary result of the peculiar mental constitution of the mute, encourage this defect by their mode of instruction?

Starting out with the idea that the deaf-mute thinks in natural signs, or inverted English, they would seek to conform their teaching to this idea, and because, forsooth, the pupil thinks backward, they would teach them language backward by their use of natural signs; thus encouraging and confirming the pupil in this mode of thought.

Great stress is laid upon proficiency in the sign-language, as thought it, alone, were the means of the pupil's greatest advancement. One writer even goes so far as to say directly, that “with the aid of these books, [Dr. Peet's Elementary Lessons,] these teachers, [deaf-mutes,] through their perfect command of the language of signs, have succeeded, during the first years of a deaf-mute's school life, in communicating ideas, and securing a development of the mental and moral powers, which the 56 best hearing teacher could not have accomplished in the same time.” Here, of course, it is proficiency in the natural sign-language alone that accomplishes so much. Admitting all that may be said of the beauty and dignity of the sign-language, what are natural signs in their legitimate use but the means by which we reach the mind of the uneducated deaf-mute, and convey ideas to his mind more conveniently than we otherwise could?

Do natural signs convey to him our language? Not at all. They are only a mode of interpretation of our language, and are even not absolutely necessary for this, for pupils are now taught in some schools without the intervention of signs. Farther than this, natural signs are not only useless, but are positively injurious, and the more a teacher conforms to the pupil's mode of thinking, by the use of signs, the more he hinders the real progress of the pupil in the acquisition of correct written language. As a general rule it may safely be said that the more proficient a pupil is in the use of natural signs, the less likely is he to become well-versed in written language; and may it not with equal propriety be said that the more skilled a teacher is in the sign-language, the more will he rely upon it as a

means of instruction, and the less will he really accomplish. The question is not how the pupil shall acquire ideas or moral truths, which we know he can in the main gain through the sign-language alone. These are not the test of his proficiency. The question in which we are more interested is, how shall he best learn the *English language* in its purity and simplicity?

To accomplish this we are to use all the aids and facilities we can command—object lessons, natural signs, methodical signs, but mainly the plain written language, directed to the eye first, last, and all the time. The use of natural signs farther than I have intimated I consider positively detrimental to this purpose. If signs are deemed necessary more than this, let them be made in strict conformity with the written language, word for 57 word. What if, as some suppose, the pupil cannot at first comprehend the relations of word signs? It should be the end and aim of the teacher to bring the pupil up to this point, and the sooner he begins the better. It may at first be a matter of sight, of repetition, of practice, but the practice will make the process familiar and easy, and here I have been led to think that the teacher sometimes underrates the ability of the pupil, and makes the pupil responsible for his own errors.

Is it not more in consonance with reason, and will not experience prove, that a pupil will learn more readily and understand more fully a plain proposition written out, and explained by word signs, than a sentence dictated by natural signs which he is required to interpret and write out himself? Shall the teacher conform his instruction to what he supposes to be the mental status of the deaf-mute, and further cramp and distort the unformed yet ductile mind of the pupil, and seek to confirm him in this habit; or shall he at once endeavor to bring him up to the correct standard of the written English language? It matters not how the pupil thinks; he is to be made to think as we think, and to write as we write.

The speaking child learns the language by hearing every day familiar expressions. So I would have the deaf-mute learn the pure, simple, natural language. I would have no peculiarities, no crude, uncouth, disjointed, useless phrases, no wresting of the language

in the book, or on the slate, for the sake of some new word or phrase, as is too often the case. I would, if possible, never have the pupil see a sentence, much less teach him to write one, which should not be grammatically and strictly correct.

Written language is only to be learned by a constant, unwearied repetition of word upon word, and sentence upon sentence; but let these words and these sentences always be written in pure, natural, unmistakable English.

MISCELLANEOUS. BY THE EDITOR.

The Tabular Statement of the Institutions. —Four institutions appear for the first time in our list this year, viz: Whipple's Home School, the Chicago Day School, the Oregon Institution, and the Cleveland Day School; making the whole number now existing in the United States thirty-eight. The Mississippi Institution, which had been closed since 1864, has been reopened. The Chicago Day School was probably broken up by the great fire, as the circulars requesting information regarding it, which were sent to the principal, have received no response. Steps have been taken toward the organization of a day school in Cincinnati, but the school will probably not be opened until next autumn. Articulation and lip-reading are the means of instruction in Whipple's school and the two day schools; signs and the manual alphabet, we think, in the Oregon and Mississippi institutions.—The table shows an increase of 284 in the number of pupils in attendance over the number of the year previous, and an increase of 38 in the number of teachers.—The table gives what has never been presented before, the number of semi-mute pupils in each institution, and the number of semi-mute teachers—information which we believe will be of interest to our readers, and of value in connection with the question of teaching articulation. The whole number of semi-mute pupils is 421, which is about thirteen per cent. of all the pupils. The proportion differs so much in different institutions that it seems as if there must have been a different standard in making the estimates; as, for instance, where the New York Institution, with 580 pupils, reports but 35 semi-mutes, while the Indiana Institution, with 269 pupils, reports 38, and the Ohio Institution, with 388 pupils, reports 36. Similar

disproportions are apparent in the statistics of some other institutions. The institution at Buffalo, N. Y., which has 25 pupils, and the Catholic Male Institution at Montreal, Canada,

AMERICAN INSTITUTIONS FOR THE INSTRUCTION OF THE DEAF AND DUMB, JANUARY 1, 1872.

NAME. LOCATION. Date of opening. CHIEF EXECUTIVE OFFICER. Number of Pupils in 1871. Male. Female. Semi-Mute.* Number of Teachers.† Male. Female. Deaf-Mute.‡ Semi-Mute.* SCHOOL HOURS. EVENING STUDY HOURS. SCHOOL YEAR BEGINS. SUMMER VACATION BEGINS. TRADES. 1 American Asylum Hartford, Conn. 1817 Edward C. Stone, M. A., Principal 202 181 111 20 17 10 7 5 2 9 to 12 and 2 to 4 7 to 8½ Second Wed. Sept. Last Wed. June Cabinet-making, shoe-making, and tailoring. 2 New York Institution New York, N. Y. 1818 Isaac Lewis Peet, M. A. do 580 341 239 35 30 18 12 7 10 8 to 1 7 to 10 First Wed. Sept. Last Wed. June Cabinet-making, horticulture, painting and glazing, shoe-making, tailoring. 3 Pennsylvania do Philadelphia, Pa. 1820 Joshua Foster do 272 151 121 30 13 11 2 3 8½ to 11½ and 2½ to 4½ 7½ to 8½ and 10 First Wed. Sept. Last Wed. June Shoe-making and tailoring. 4 Kentucky do Danville, Ky. 1823 J. A. Jacobs do 83 48 3? 6 4 2 3 1 8 to 12 and 1½ to 3 7 to 9 October 1 August 1 Gardening. 5 Ohio do Columbus, Ohio 1829 Gilbert O. Fay, M. A., Superintendent 388 227 161 36 21 9 12 10 1 7½ to 9½, 10½ to 12½, 2 to 53 7 to 8, 8½ and 9 Second Wed. Sept. Third Wed. June Book-binding, printing, and shoe-making. 6 Virginia do Staunton, Va. 1830 Chas. D. McCoy, Principal 92 47 45 2 6 6 4 8½ to 1½ 7 to 9 First Wed. Sept. Fourth Thurs. June Cabinet-making and carpentering, printing in raised type and book-binding, shoe-making, tailoring. 7 Indiana do Indianapolis. Ind. 1844 Rev. Thos. MacIntire, M. A., Sup't. 269 142 127 38 14 8 6 3 3 7¾ to 1 7 to 8¾ First Wed. after Sept. 15. Last Thurs. June Cabinet-making, shoe-making, and tailoring. 8 Tennessee School Knoxville, Tenn. 1845 Joseph H. Ijams, B. A., Principal 113 65 48 10 8 7 1 3 9 to 12 and 2 to 3½ 7 to 9 Middle of Sept. Middle of June None. 9 North Carolina Institution Raleigh, N. C. 1845 S. F. Tomlinson, B. A. do 132 73 59 14 9 7 2 4 1 8 to 2 7½ to 9 First Wed. Sept. Last Thurs. June Shoe-making. 10 Illinois do Jacksonville, Ill. 1816 Philip G. Gillett, LL. D. do 269 133 136 25 16 9 7 3 1 8 to 12½ 7 to 9 First Wed. Oct. First Wed. June Cabinet-making and wood-turning, farming, painting and glazing, printing, shoe-making. 11 Georgia do Cave Spring, Ga. 1846 W. O. Connor do 54 24 30 7 4 3 1 1 1 8 to 1 6½ or 7 to 8 First Wed. Sept. Last Wed. June Shoe-making. 12 South Carolina do Cedar Spring, S. C. 1849 J. M. Hughston do 15 7 8 1 3 1 2 1 8 to 1 8 to 9 January 1 Last of Oct. Carpentering and shoe-making. 13 Missouri Asylum Fulton, Mo. 1851 Wm. D. Kerr, M. A., Superintendent 163 76 87 16 8 4

4 3 Five hours One hour and a half September 20 First Thurs. July None. 14 Louisiana Institution Baton Rouge, La. 1852 J. A. Mc Whorter, M. A. do 47 26 21 3 4 3 1 1 2 8 to 1 7 to 8½ First Wed. Oct. Second Wed. July Printing. 15 Wisconsin do Delavan, Wis. 1852 George L. Weed. jr., M. A., Principal 149 80 63 6 9 7 2 2 9 to 12 and 1½ to 3½ 7 to 8½ First Wed. Sept. Last Wed. June Cabinet-making and shoe-making. 16 Michigan do Flint, Mich. 1854 Egbert L. Bangs, M. A. do 150 80 70 25 11 9 2 6 2 9 to 12 and 1¾ to 3¾ 7 to 8¾ Second Wed. Sept. Last Wed. June Cabinet-making and shoe-making. 17 Iowa do Council Bluffs, Ia. 1855 Rev. Benjamin Talbot, M. A., Sup't. 119 72 47 16 7 5 2 3 9 to 12 and 2 to 4 7 to 8 or 8 to 9 Third Wed. Sept. First Wed. June None. 18 Mississippi do Jackson, Miss. 1856 John L. Carter, M. D., Sup't. 19 Texas do Austin, Texas 1857 J. Van Nostrand, M. A., Principal 34 22 12 2 3 2 1 2 9 to 12 and 1½ to 3 Varying with season Second Wed. Sept. Fourth Wed. June None. 20 Columbia do Washington, D. C. 1857 E. M. Gallaudet, Ph. D., LL. D., President 104 87 17 21 11 10 1 1 3 8¼ to 12¼ and 1 to 3 7 to 8 and 9 September 28 June 28 Cabinet-making and gardening. 21 Alabama do Talladega, Ala. 1858 Joseph H. Johnson, M. D., Principal 50 18 32 1 3 3 2 8 to 1 7½ to 8½ First Mond. Oct. July 4 None. 22 California do Oakland, Cal. 1860 Warring Wilkinson, M. A. do 65 39 26 6 4 4 2 9 to 12 and 1 to 3 7 to 8 Last Wed. Aug. Second Wed. June Cabinet-making, gardening, and shoe-making. 23 St. Bridget's Inst'n (Cath) St. Louis, Mo. 1860 Sister Stanislas do 25 25 1 1 1 9 to 12 and 2 to 4 7½ to 8 September 1 June 28 Dress-making. 24 Kansas Institution Olathe, Kansas 1862 L. H. Jenkins, M. A. do 47 26 21 8 4 3 1 1 9 to 12 and 1 to 3 7 to 9 Second Wed. Sept. Second Wed. June None. 25 St. Mary's Asylum (Cath) Buffalo, N. Y. 1862 Sister Mary Ann do 63 27 3? 6 1 5 2 9 to 11½ and 1½ to 4 7½ to 8¾ First Thurs. Sept. Last Thurs. June Carpentering, cane-work, dress-making, gardening, knitting. 26 Minnesota Institution Faribault, Minn. 1863 Jonathan L. Noyes, M. A., Sup't. 60 35 25 12 5 2 3 1 Five hours 7 to 8 Second Wed. Sept. Last Wed. June Coopery and farming. 27 Inst'n for Improved Instr'n. New York, N. Y. 1867 F. A. Rising, M. A., Principal 53 28 25 11 5 1 4 9 to 12 and 1 to 3 7 to 8 First Wed. Sept. First Wed. after June 20 None. 28 Clarke Institution Northampton, Mass. 1867 Miss Harriet B. Rogers do 46 26 20 37 5 5 9 to 12 and 1½ to 3½ 6½ to 8½ Third Wed. Sept. Third Wed. July None. 29 Arkansas Institute Little Rock, Ark. 1867 Elmore P. Caruthers, M. A. do 61 35 26 9 3 2 1 1 9 to 12 and 2 to 4 7½ to 8½ First Wed. Oct. Last Wed. June None. 30 Maryland Institution Frederick City, Md. 1868 Chas. W. Ely, M. A. do 90 61 29 9 8 5 3 1 1 7½ to 9½, 9¾ to 12½, 2 to 4½ § 7 to 8½ First Wed. Sept. Last Wed. June Shoe-making. 31 Nebraska Institute Omaha. Neb. 1869 do 25 12 13 3 2 2 1 1 9 to 12 7 to 8½ Second Wed. Sept. Third Wed. June Printing. 32 Pittsburgh Day School Pittsburgh, Pa. 1869 Archy Woodsides, Teacher 35 17 18 7 2 1 1 1 9½ to 2½ None First Mond. Sept. Last Frid. June

None. 33 Boston Day School Boston, Mass. 1869 Miss Sarah Fuller, Principal 45 19 20 8 4 4 9 to 2 None First Mond. Sept. Early in July None. 34 Whipple's Home School Mystic, Conn. 1869 Jonathan Whipple, Jr. do 4 3 1 1 1 1 8½ to 12 and 1½ to 5 None September 1 August 1 None. 35 West Virginia Institution Romney, West Va. 1870 Horace H. Hollister M. A. do 49 30 19 8 4 2 2 1 9 to 12 and 1½ to 3½ 7 to 8½ Second Wed. Sept. Third Thurs. June None. 36 Chicago Day School Chicago, Ill. 1870 D. Greenberger, Principal. 37 Oregon Institution Salem, Oregon 1870 Wm. S. Smith do 14 9 5 3 2 1 1 1 1 9 to 12 and 2 to 4 7 to 8 First Wed. Sept. Second Wed. June None. 38 Cleveland Day School Cleveland, Ohio 1871 Miss M. A. Seeber, Teacher 11 4 7 1 1 1 9 to 2 None First Mond. Sept. Last Frid. June None. 38 Institutions in the U. S. 4,068 2,277 1,791 421 260 161 99 80 30 National Deaf Mute College.¶ Washington, D. C. 1864 E. M. Gallandet, Ph. D., LL. D., President 54 53 1 16 7 7 1 6 hours for recit'ns and study. Three hours September 28 June 28 None. Montreal Cath. Inst. (Male) Montreal, Can. 1848 J. A. Belanger, Principal 75 75 7 7 2 8 to 10½ and 2 to 4 1½ to 2 and 4½ to 6½ September 1 July 1 Book-binding, cabinet-making, farming and gardening, printing, shoe-making. Montreal Cath. Inst. (Female) Montreal, Can. Halifax Institution Halifax. N. S. 1857 J. Scott Hutton, M. A., Principal 43 27 16 4 3 3 1 9 to 1 and 2 to 4 7 to 8 First Wed. Sept. Second Wed. July Gardening. Ontario do Belleville, Ont., Can. 1870 W. J. Palmer, Ph. D. do 113 75 38 12 7 5 2 2 8½ to 2 7 to 9 First Wed. Sept. Last Wed. June Cabinet-making and carpentering. Montreal Protestant Inst'n. Montreal, Can. 1870 Thos. Widd. do 18 15 3 2 2 1 1 1 Five hours 6½ to 7½ First Wed. Sept. Last Wed. June Carpentering and gardening.

* Under this head are included the semi-deaf and all the deaf who have acquired some knowledge of language through the ear.

† Including the principal.

‡ Not including the semi-mute teachers.

§ Two sessions are for school, and one for shops, by a system of rotation.

¶ The National Deaf-Mute College is a distinct organization within the Columbia Institution. Its professors and students are included in the statement of the Columbia Institution given above.

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EDWARD A. FAY, *National Deaf-Mute College,* Washington, D. C.